

Appl. No. 10/602,240

Attorney Docket : A-2-10

In the Claims

Please amend the claims as follows:

CLAIMS:

1-79. (CANCELLED).

80. (Currently Amended) A method for removing a structure in or around a patient's heart comprising:

introducing a distal end of a tubular catheter shaft through an opening in the patient's body to the patient's heart, the tubular catheter shaft having a distal opening and an inner lumen in communication with the distal opening;

positioning a distal end of the tubular catheter shaft adjacent a structure in or around a patient's heart;

positioning such that an electrode terminal and a return electrode through said tubular shaft such that the electrode terminal is located adjacent said structure;

spacing the return electrode away from the structure and the patient's heart; and

applying a sufficient high frequency voltage difference between the electrode terminal and the return electrode to remove the structure from the patient's heart.

81. (Previously Presented) The method of claim 80 wherein the applying step comprises applying a sufficient high frequency voltage difference between the electrode terminal and the return electrode to ablate a portion of the structure.

82. (Previously Presented) The method of claim 81 wherein the spacing step is carried out by locating the return electrode proximal to the electrode terminal.

83. (Previously Presented) The method of claim 81 wherein the high frequency voltage is applied in the presence of electrically conductive fluid.

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84. (Previously Presented) The method of claim 83 further comprising generating a current flow path through the electrically conductive fluid between the return electrode and the electrode terminal through the electrically conductive fluid.

85. (Previously Presented) The method of claim 80 wherein the structure comprises heart tissue.

86. (Currently Amended) The method of claim 80 wherein the electrode terminal and the return electrode are positioned at a distal portion of the tubular eatheter shaft and radially outward from the distal opening, the method further comprising rotating at least the distal portion of the catheter shaft during the applying step.

87. (Previously Presented) The method of claim 80 wherein the electrode terminal comprises an electrode array of electrically isolated electrode terminals, the method further comprising applying high frequency voltage to the electrode array of electrically isolated electrode terminals and the return electrode in the presence of electrically conductive fluid such that an electrical current flows from each of the electrode terminals, through the electrically conductive fluid, and to the return electrode.

88. (Previously Presented) The method of claim 80 further comprising aspirating a region around the structure.

89. (Previously Presented) The method of claim 83 wherein the high frequency voltage is sufficient to vaporize the fluid in a thin layer between at least a portion of the electrode terminal and the structure.

90. (Currently Amended) The method of claim 84 further comprising directing the electrically conductive fluid through a fluid lumen in the tubular eatheter shaft to generate a current flow path between the electrode terminal and the return electrode.

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91. (Previously Presented) The method of claim 80 further comprising applying high frequency voltage between the electrode terminal and the return electrode to remove tissue at the heart wall.

92. (Previously Presented) The method of claim 91 further comprising forming a revascularizing channel through at least a portion of the heart wall, the revascularizing channel extending from a surface of the heart wall into the myocardium to restore blood flow to a portion of the myocardium.

93. (Previously Presented) The method of claim 85 wherein the heart tissue is selected from the group consisting of epicardium, myocardium, and endocardium.

94. (New) The method of claim 83 wherein said electrically conductive fluid has an electrical conductivity of at least 2 mS/cm.

95. (New) The method of claim 80 wherein said tubular shaft comprises a flexible catheter member.

96. (New) The method of claim 80 wherein said tubular shaft comprises a rigid trocar.

97. (New) The method of claim 80 wherein said electrode terminal and return electrode are affixed to a probe distal portion and said probe is inserted through said shaft